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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MASAYUKI KAMON and EIICHI YAGI

Appeal 2009-005958
Application 10/689,995
Technology Center 3600

Before JOHN C. KERINS, STEVEN D.A. MCCARTHY, and
MICHAEL W. O'NEILL, *Administrative Patent Judges*.

O'NEILL, *Administrative Patent Judge*.

DECISION ON APPEAL¹

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

Masayuki Kamon and Eiichi Yagi (Appellants) appeal under 35 U.S.C. § 134 from the Examiner's decision finally rejecting claims 8-10 under 35 U.S.C. § 103(a) as unpatentable over Takagi (JP 4-115592, published Oct. 14, 1992). We have jurisdiction under 35 U.S.C. § 6(b). We REVERSE.

THE INVENTION

The claims on appeal relate to an articulated manipulator formed by joining a plurality of links by rotary joints.

Claim 8, reproduced below, is illustrative of the subject matter on appeal.

8. An articulated manipulator comprising:
a base;
first to sixth links arranged in series on the base;
and
a plurality of joints rotatably connecting the base and the first link, and the two adjacent links out of the first to sixth links,
wherein, the joints include first and second coaxial joints and first to fourth diagonal joints,
the first link is connected to the base by the first coaxial joint for rotation about a rotation axis coaxial with an axis of the first link,
the first link and the second link are connected to each other by the first diagonal joint for rotation about a rotation axis inclined at an angle of 45 degrees relative to the first axis of the first link,
the second link and the third link are connected to each other by the second diagonal joint for rotation about a rotation axis inclined at an angle of 45 degrees relative to the axis of the second link, the rotation axis being parallel to the rotation axes of the first and second links,

the third link and the fourth link are connected to each other by the third diagonal joint for rotation about a rotation axis inclined at an angle of 45 degrees relative to the axis of the third link, the rotation axis being perpendicular to the rotation axes of the second and third links,

the fourth link and the fifth link are connected to each other by the second coaxial joint for rotation about a rotation axis coaxial with the axis of the fourth link, and

the fifth link and the sixth link are connected to each other by the fourth diagonal joint for rotation about a rotation axis inclined at an angle of 45 degrees relative to the axis of the fifth link.

DISCUSSION

“[R]earranging parts of an invention involves only routine skill in the art,” is the Examiner’s reason to modify Takagi’s manipulator in order to conclude that the arrangement of links of the manipulator claimed is obvious. Ans. 4. The Examiner’s reasoning is tantamount to a *per se* rule of obviousness. *Per se* rules directed to the alleged obviousness of a claimed invention are looked upon with disfavor. See *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (reliance on *per se* rules of obviousness that eliminate the need for fact-specific analysis of claims and prior art is legally incorrect). In order to conclude that the claimed arrangement of links of the manipulator is rendered obvious by rearranging the links of Takagi’s manipulator, the Examiner must articulate a reason with some rational underpinning that a person having ordinary skill in the art would arrange Takagi’s links in the manner claimed by Appellants without resorting to hindsight bias. Here, the Examiner appears to have fallen prey to such hindsight bias.

Moreover, Takagi itself fails to provide a rational underpinning to rearrange the links of the manipulator disclosed therein. Takagi discloses a particular arrangement of links for a robot arm (manipulator, Appellants' nomenclature). Takagi discloses, in a first and second embodiment (*see* Figures 1 through 4), a six-link manipulator with five diagonal joints at 45 degrees relative to a central axis of each link. In a third embodiment, Takagi adds coaxial joints to the first embodiment. *Compare* Figure 5 to Figure 1. While the first three links (starting at the base of the robot arm) of Takagi's first embodiment (Figures 1 and 2) are arranged substantially similarly to Appellants' invention, the latter links (the links distal to the base of the robot arm) are not arranged in the manner recited within the claims on appeal. Concerning Takagi's third embodiment (Figure 5), while the robot arm has a coaxial joint arranged substantially similarly to the claimed distal arrangement of links, a coaxial joint (the joint including internal gear 26) that bisects the robot arm makes the arrangement substantially different from the link arrangement as set forth in the claims. Essentially, Takagi's third embodiment appears to be a modification of Takagi's first embodiment with the addition of two coaxial joints, one proximate the distal end of the robot and the other bisecting the robot arm and thus having the third link become two separate links. Therefore, nothing within Takagi's disclosure itself provides any rational underpinning for a person having ordinary skill in the art to consider modifying the disclosed link arrangements within Takagi's three embodiments in the manner recited by Appellants' claimed invention.

Further, the Examiner fails to provide a cogent explanation why a person of ordinary skill in the art would arrange Takagi's links as claimed based on the arrangements of the links as disclosed in Takagi and noted

hereinabove. Additionally, the Examiner's supplemental reasoning, in response to Appellants' contentions, that a person would arrange the links in the manner claimed for a "desired end result" (*see* Ans. 5), is essentially conclusory and does not provide any rational underpinning, other than viewing Appellants' Specification, as to why a person of ordinary skill would arrange Takagi's links as claimed by Appellants.

DECISION

In view of the foregoing, the Examiner's decision to reject claims 8-10 as unpatentable over Takagi is reversed.

REVERSED

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